Salt Cedar Management on Cave Creek, Maricopa County, Arizona

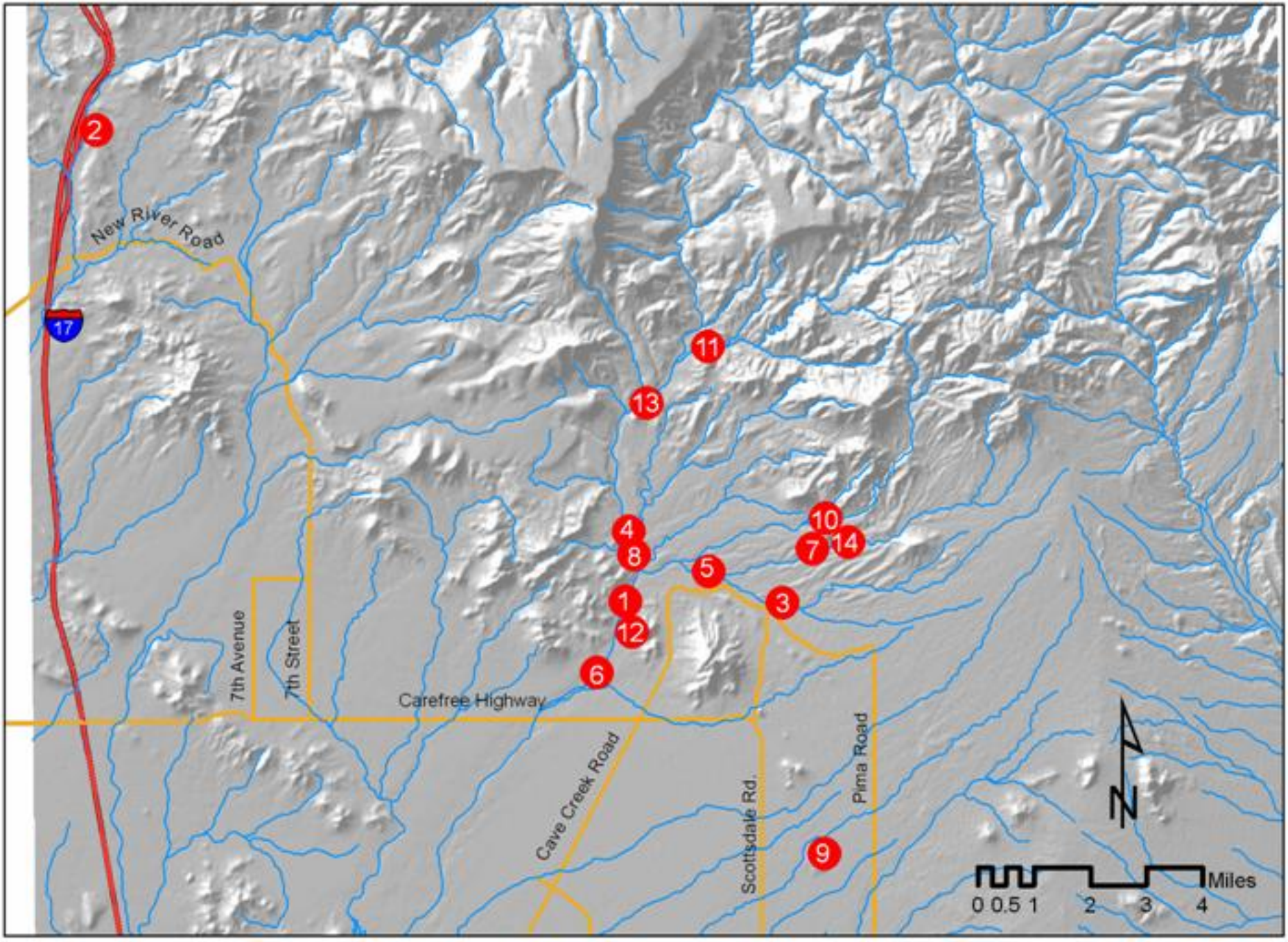
Desert Foothills Land Trust

Thomas Hulen, Conservation Director

Our Mission

The Desert Foothills Land Trust works with communities and partners to protect, preserve and steward sensitive lands and species for the survival of the fragile Sonoran Desert.

The Desert Foothills Land Trust's service area is located north of Phoenix and encompasses the Cave Creek and New River watersheds.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New River Road
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Carefree Highway
Cave Creek Road
Scottsdale Rd.
Pima Road
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Miles

Desert Foothills Land Trust Organization Profile

- Incorporated in 1991
- Fourteen Preserves
- 529.66-acres; Fee simple 340.66-acres;Conservation easement 189-acres
- Three full time staff: Executive Director, Conservation Director, Office Manager
- 1000 members

Restoration and Management History

- The seven acre Herbert and Dorothy Watt Preserve was donated to the Desert Foothills Land Trust in 1991.
- Perennial stretch of Cave Creek
- Mixed deciduous riparian Sonoran woodland
- Salt cedar infestation (approximately one acre) Members (all volunteers) began an organized effort to remove the salt cedar and plant native trees, i.e. Fremont cottonwood.
- Exotic and native fish present

Ecology of Cave Creek

Advantages

- Unregulated watershed: no upstream dams or diversions
- Significant sized patches of mixed deciduous Sonoran riparian woodland
- Several reaches perennial with native fish, lowland leopard frogs, Sonoran mud turtles and significant avifauna
- Natural native plant recruitment – minimal need for replanting

Threats

- Salt cedar invasion
- Unregulated groundwater pumping
- Exotic fish
- Wildfire

Why Manage Salt Cedar?

- Can out compete native vegetation for resources, i.e. space, water, sunlight etc.
- Salt cedar stands have less overall species diversity
- It is estimated less than 1% of the riparian habitat in the southwestern U.S. remains unaltered
- Dense salt cedar stands can un-naturally alter stream flow
- Aesthetically not as appealing as native woodland to the local community

Goals

- Remove salt cedar to reduce competition with native plants
- Increase species diversity, i.e. plants, birds, insects, fish, reptiles, amphibians and mammals
- Encourage stream stability
- Increase aesthetic qualities of Cave Creek

Potential for Success

- Salt cedar growth favors regulated streams in the southwest; Cave Creek is unregulated
- Salt cedar infestation; less than 10% of stream bank – manageable quantity
- Significant community support
- Significant technical support from universities, community colleges, Maricopa County Extension office, National Forest, Central Arizona Weed Management Committee and others

Methodology

- Cut-stump herbicide application (vegetable oil formulation with triclopyr (Garlon® or Tahoe®))
- Remove cuttings from stream bed and transport to local landfill
- Volunteer labor (local community members and Volunteers for Outdoor Arizona)

Salt Cedar Management

Volunteers for Outdoor Arizona volunteer cutting salt cedar on Cave Creek

Salt Cedar Management on Cave Creek

Volunteer applying herbicide to cut salt cedar stumps

Salt Cedar Management on Cave Creek

Volunteers carrying cut salt cedar limbs to dumpster

Mechanisms to Ensure Easement Landowners Cooperation

Conservation Rights Conveyed to Grantee (Desert Foothills Land Trust) in Deed of Conservation Easement

- To identify, to preserve and protect in perpetuity, and in the event of their degradation or destruction, to restore or to enforce the restoration of open space, wildlife corridors, and significant relatively natural ecological features and values of the property.
- To perform restoration, rehabilitation or improvement work on the property deemed necessary to protect, restore or enhance the conservation values of the property.

Adjacent Properties

- Most of the property on Cave Creek is not owned by the Desert Foothills Land Trust or is a conservation easement managed by the Desert Foothills Land Trust.
- To manage salt cedar on Cave Creek and to work towards its total elimination it is necessary to secure the cooperation of other landowners.
- All cooperative landowners have granted access to their property for salt cedar management. Several landowners actively manage salt cedar themselves (with the cooperation of the Desert Foothills Land Trust)
- Cooperative landowners have been the Desert Foothills Land Trust's most successful agents for securing additional landowner cooperation.

Salt Cedar Management on Cave Creek

Local landowner assisting with salt cedar transportation

Partnerships

- Town of Cave Creek – Loan of equipment, payment of dump fees, other in kind services
- Volunteers for Outdoor Arizona – Volunteers and volunteer management
- University of Arizona - Maricopa County Extension Office Master Watershed Steward Program – expertise and volunteers
- Arizona State University - expertise
- United States Forest Service – Forest Health grant
- Nina Mason Pulliam Charitable Trust - grant
- Central Arizona Weed Management Committee
- Numerous creek side landowners.

Challenges

- Not always easy to recruit volunteers - salt cedar removal is hard work
- Even though funding is adequate for current restoration activities using volunteers more funding would enable the Desert Foothills Land Trust to hire a contractor remove more salt cedar
- High population growth rate – more pressure on groundwater supplies as the number of unregulated wells increases

Advice

- Learn the facts about restoration activity
- Interact with people and organizations performing similar restoration activities – volunteer to help them and gain invaluble on the job training
- Community education program through local media, programs at schools, fairs and service organizations – let the community know what the problem is, what your organization is doing to solve the problem and how the community can help
- Send out press releases and invite the press
- Communicate with as many local landowners as possible about your restoration activity – get as many as you can on your side – keep everyone in the information loop – invite them to a restoration event
- Be flexible, develop alternatives, i.e. in many communities there will be opposition to using herbicides
- If you use volunteers provide adequate training, provide safety equipment and feed them

Conclusion

- In 2004, 2005 and the first half of 2006 approximately two miles of Cave Creek has been treated for the removal of salt cedar using volunteer labor and the contributions of local supporters
- Approximately one mile of this area is managed by the Desert Foothills Land Trust. The remaining one mile is owned by cooperating landowners.

Salt Cedar Management on Cave Creek

Before treatment

After treatment